

REMARKS

Reconsideration and allowance are respectfully requested in view of the following remarks.

Claims 1-52 stand rejected as being anticipated or otherwise unpatentable over Schenk (U.S. Patent 5,307,029). This rejection is respectfully traversed.

Schenk is directed to a comb (frequency) generator employing a divide-by circuit to generate a series of tones derived from a reference signal source. The comb generator operates in conjunction with a set of RF bandpass filters (BPFs). In the Schenk frequency generator, filtering is fundamental to making generation of coarse tones/frequencies feasible. A mixer is used to generate both upper and lower sidebands which are then filtered to generate a desired (upper or lower) sideband tone frequency. The presently claimed invention uses neither a comb generator as described in Schenk nor filtering (BPF).

While the presently claimed invention utilizes a divider circuit (as per Schenk), Applicant's divider is used for local oscillator (LO) generation and operable in a feedforward, feedback, or bypass configuration to generate different frequency bands. In addition, a single-sideband mixer is used which can be switched to generate either the upper or lower sidebands by changing the phases of the mixer input signals. The output of the mixer, in contrast to the operation of the mixer in Schenk, does not require filtering to eliminate the undesired sideband.

Schenk fails to teach how its PLL is connected or otherwise employed to generate appropriate frequency bands, or how channels are generated. By contrast, Applicant's PLL is connected to a reference frequency which is compared to one of the following, depending on the band of interest, to make the integer PLL numerology possible: the RF input to the PLL may be, for example, the VCO output (a divided VCO signal) or a mixer output signal.

While the Schenk device and Applicant's direct conversion architecture utilize a divider and mixer as claimed, the cooperative interrelation of these components is radically different in approach, and specifically, in regard to generating a desired frequency.


In light of the foregoing, the Examiner's reconsideration of this application with a view toward allowance is respectfully requested.

The Examiner is invited to call the undersigned agent if a telephone call could help solve any remaining items.

The Commissioner is hereby authorized to charge any additional fees that may be required, or credit any overpayment, to Deposit Account No. 17-0026.

Respectfully submitted,

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